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DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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March 21, 2003

TO: Minerals File  
FROM: Tom Munson, Senior Reclamation Specialist *TM*  
RE: Site Inspection, Aragonite Mine, M/045/031, Tooele County, Utah

Date of Inspection: Tuesday, March 11, 2003  
Time of Inspection: 11:00 a.m.-12:30 p.m.  
Conditions: Sunny  
Participants: Tom Munson, Doug Jensen, DOGM; and Lon Thomas, Star Stone

Purpose of Inspection: To inspect the site with Mr. Thomas and determine what could be done to make the site safe from hazardous mine openings and resolve any permit deficiencies.

**Observations:**

The majority of the inspection was spent looking at the three shafts which the Division considers hazardous. We informed Mr. Thomas that the Division has documentation to verify the disturbances which we hold him responsible for. These disturbances, even though revegetated, will still need regrading and revegetation. Mr. Thomas started to point out some disturbed area markers. Mr. Munson said that we would use our past maps and pictures to identify what he was responsible for, rather than spend time now trying to find markers which had been placed ten years previous. These markers are either non-existent or gone. Mr. Thomas did not dispute these claims, except for the historic underground mining areas and other areas he didn't touch.

Shaft #1

This is a vertical shaft that was used to bring ore (aragonite) to the surface from underground workings. It is boxed in with timbers and has a welded metal collar at the surface that can be used to weld a steel cover to. Mr. Thomas agreed that the best solution to secure this hazard would be to weld a permanent cover over the shaft that cannot be easily removed.

South-End Glory Hole

This hole was caused by the caving of underground workings that came too close to the surface of the existing open pit. The hole is most likely, although not measured, 30-40 feet across and 100 feet deep. It is caving and surrounded by loose unstable material. The only feasible way of permanently closing this hole would be to blast it shut and cave enough material back in the hole to fill it up. The only access is by foot or small OHV on an existing access road. Mr. Thomas stated that he did not want to close this hazard because it offered access to additional ore and if he blasted it shut it would contaminate the ore body. Therefore, the only other alternative to prevent access to this hole and this southern area of the mine

is to breach the upper access road on the east face of the southern end of the pit, making it very difficult to access this hazard on foot or by vehicle. It will also be necessary to post warning signs and possibly some barbed wire fence to prevent access to the pit.

#### North-End Glory Hole

This hole is accessed by the road on the north side of the open pit mine. At one time, there appeared to be some boulders blocking access to the entrance of the pit on this end; however, all but one had been removed, making it possible to drive into and camp close to the North-end Glory Hole. There is evidence of fire rings and camping within the pit. Within a hundred feet you are standing at the lip of another Glory Hole, 30-40 feet across and 100 feet deep. Although this hole is not as steep as the southern hole, it is still steep enough that if anyone falls into it they would most likely drop the 100 or so feet to the bottom. Mr. Thomas also wants to keep this hole open, for similar reasons as the South-End Glory Hole, it was discussed that it is essential that access is blocked to this end of the open pit. It was discussed that the rock walls would be drilled 100 feet from the opening and a barbed wire barrier fence would be anchored into the rock walls and installed to prevent access. The Division stated that it would be impossible to prevent people from accessing this hazard, but the barbed wire would certainly add a deterrent.

#### Access road on the east side of the north end of the pit

This road was discussed because someone could possibly drive an OHV up it and drive off into the pit. It was suggested that T-posts be installed with warning signs, both at the end of the road and at the entrance.

#### Conclusions and Recommendations:

This site conditions presents a difficult situation. It is our opinion that nothing short of blasting these two hazardous openings shut will prevent these hazards from being a potential disaster, given the right set of circumstances. This site is located on private property and has been disturbed by many years of historic mining. Mr. Thomas definitively stated, that he is trying to sell this property to a company who will mine the aragonite. If the openings are blasted shut, then this limits his ability to sell the property. The Division's concerns center around the safety of the public. The two interests are at odds with one another and, therefore, any compromise on the part of either party will hopefully warn the public of the hazards and prevent disaster. We requested that the operator make recommendations as to what his intentions are in identifying and mitigating these hazards.

Regarding the permitting concerns, we will use the map and the pictures located in the Division files to determine the disturbed areas that Mr. Thomas is responsible for. If Mr. Thomas has any requests for release of these areas, then it is in his best interest to meet with the Division and formally request the release in writing.